SUMMARIES & RECOMMENDATIONS

The main purpose of the conference was to decide how to strengthen national agricultural research capabilities in order to increase essential food supplies in the less developed countries. In the final session, the Chairman, Mr. Haldore Hanson of CIMMYT, suggested the following general types of initiatives:

(a) The creation of new institutions or the significant strengthening of established institutions;

(b) Expanded financial assistance;

(c) Expanded technical assistance;

(d) New set of priorities for the guidance of donors.

Mr. Hanson asked: "How can the essential initiatives be stimulated within the less developed countries since it is within the recipient countries that the political will must originate and be acted upon before any new relevant initiatives can be put into operation?"

The Chairman stated that the consensus was against recommending a new international agency and that perhaps because of their diversity of need and resources, national agricultural systems might best be strengthened through informal consortia of donors working in close cooperation with regional centres and regional cooperative networks.

The Chairman expressed the view that both donors and recipients need to know more about the social and political constraints which influence the demand for and adoption of improved agricultural technologies. Serious efforts must be made to improve the quality of technical assistance. There may need to be a serious and continuing review both by donors and by independent organizations such as the TAC of technical assistance programs.

The Chairman referred to the comments made by several speakers concerning the potential conflict between the financial and human demands of the International Agricultural Research Centers (IARCs) and those of national programs in developing countries. The prestige of the IARCs tends to overshadow the important contributions made by national research workers. In addition, the IARCs are generally more adequately financed, better equipped and can offer higher financial rewards to scientists than can national institutions. Such a situation may lead to friction and antipathy between the national institutions and IARCs and may encourage a drain of scientists from national to international programs.
The Chairman emphasized that serious attention must be given to what should be the scope and limitations of the IARCs. The Chairman asked the meeting to consider what facilities are needed to provide adequate and appropriate training both in agricultural science and technology, and also in research management. He asked "What is the minimum national capability needed to test, adapt and adopt the improved technologies developed by the IARCs and others?" More than one speaker had pointed out that extensive research competence and experience is required in order to select and adapt what is appropriate from the many alternative improved technologies and technological systems provided by the IARCs and other research institutions.

The Chairman then called upon the six lead discussants to deal with each of the six selected areas.

AREA I

The question, addressed by Jose Drilon was "What Steps are Needed to Bring about a Wider Range of Government Initiatives for Strengthening their Research Systems?"

Drilon listed the following needs of many national programs:

(a) the need to strengthen organizational facilities including management capability, the manpower resource and essential physical facilities;

(b) to establish an effective rapport and understanding between the political decision makers and those responsible for the planning, execution and implementation of agricultural research;

(c) to establish and maintain effective working linkages and partnerships between the IARCs, other international agencies and national agricultural programs;

(d) development of a national capacity to evaluate, adapt and adopt improved technologies from other countries and other agencies.

(Drilon emphasized that without adequate competence and experience in applied research, national scientists cannot reliably select and adapt relevant and appropriate results from elsewhere.)

(e) continued improvement of delivery systems including
Drilon stressed that both national governments and donors who seek to assist them must be both aware of and highly sensitive to the total system, some of the components of which are listed above, which is essential to a comprehensive national agricultural research and development program. Better mechanisms are needed to bring together recipients and potential donors into effective mutually sympathetic partnerships. In the absence of any other agency capable of undertaking this task he urged that it be given serious attention by the CGIAR and the TAC. He stressed the view that the proposed International Agricultural Development Service (IADS) might also prove a valuable complementary mechanism in this process. He also stressed the need for research management and felt that this could best be undertaken by providing the necessary facilities within the developing countries, perhaps on a regional basis. He closed by emphasizing that little progress can be made in any of the above in the absence of the political will and determination.

ITEM II

The question addressed by Joel Bernstein was "What Initiatives are Needed to Seek an Orderly Increase in Funds in order to Strengthen National Agricultural Research Systems, from: (a) international and regional lending institutions, (b) UN specialized agencies, (c) bilateral donors, (d) private agricultural companies?" "Are New Institutions Needed?"
Bernstein found agreement among participants that more funds are needed to support national agricultural research capabilities. Bernstein stressed the view that the regional and international systems of cooperative agricultural research networks, some which are operated largely informally while others are more formally structured, offer valuable opportunities for increased financial investment from donor countries.

Prior to the meeting at Montebello a questionnaire was circulated to all CGIAR members which requested information concerning the manner in which they provide financial and technical assistance to developing countries. The responses from CGIAR members to the questionnaire suggest that investment in national research programs is increasing and is not in any way being adversely prejudiced by increased flows to the IARCs. There is some evidence to suggest that the principal constraint to more effective national efforts is not a shortage of money. In fact, in some instances there appears to be a limited capacity to absorb and effectively utilize the financial resources already available. It has been suggested that some of the least successful investment has been in post-harvest systems and in particular in marketing, distribution and economic components of the system. The consensus suggests that increased support should be given to the IARCs' "outreach" programs. The concept and scope of what each IARC means by "outreach" needs to be more sharply and precisely defined.

AREA III

Vernon Ruttan addressed the question "What Additional Initiatives are Needed to Study the Socio-economic and Political Factors which Appear to Limit and Constrain the Adoption of and Bias the Demand for New Agricultural Technology?"

Ruttan presented his analogy of the "black box" which is interposed between the supply of new technology on the one side and the "pay off" of the new technology, (that is who benefits and how they benefit from the adoption of new technology), on the other. The "black box" comprises interactions among many complex factors, to name but a few: institutions, management, linkages among institutions, political ideologies, social structures, government and individual attitudes. He urged the need for more research by which to determine what are the constraints and interactions within the black box and how they inhibit and constrain the adoption of and ability to derive benefit from new agricultural technologies.
Robert Cunningham discussed technical assistance including difficulties related to (a) the planning of projects, (b) recruiting of experts, (c) training and, (d) what initiatives are needed to make technical assistance to recipient countries more effective?

Cunninghan expressed the view that donors should resist imposing their concepts of technical assistance upon recipient nations. There is need for more careful and sympathetic dialogues and understandings between recipients and donors particularly relating to the capacity and capability of recipients and the wide differences in resources and capabilities among different recipients who receive benefit from technical assistance. Donors should be particularly cautious in prescribing technical assistance for countries in which they have comparatively little previous experience. Given the knowledge and assent of recipient countries, there may be considerable benefit in donors forming informal consortia through which to offer technical assistance collectively and in a coordinated manner rather than individually, in isolation from, and often in apparent competition with one another.

The example of the CGIAR as a successful mechanism for cooperation among donors should be studied carefully and a no less effective mechanism for cooperation among donors and between donors and recipients devised in the area of technical assistance. One cannot overstate the difficulty of selecting technical assistance advisers who are both technically and temperamentally suited to life in developing countries in which they have had no previous relevant experience.

If donor technical assistance programs are to expand and improve in quality, steps must be taken immediately to develop qualified and competent manpower resources, possibly through university linkages between institutions in donor and recipient countries; through an extension of associate experts programs; through special training programs; perhaps through the establishment of an internationally financed training institution for technical assistance advisers. Associate expert programs are operated by a number of international agencies. Donor countries provide to the agencies comparatively young scientists who work as junior members of scientific and technical assistance programs. The associate experts are usually nationals of the donor country.

More care needs to be given to the training offered by universities in advanced countries to students from developing
countries. In far too many instances training, particularly postgraduate training, is at best remotely relevant to the needs of the recipient country.

Cunningham stressed the value of graduate (M.Sc., Ph.D.) training programs in which the theoretical studies are undertaken at a university in a developed country and the practical thesis work is carried out in the trainee's own country on a problem of relevance and importance.

AREA V

Armando Samper discussed the role of the IARCs in supporting national agricultural research programs and in particular "What steps are needed to assure effective collaboration between international and national centres to the advantage of the national programs?"

Samper proposed six requirements.

(1) Avoid overburdening the IARCs with tasks which other agencies can carry out equally satisfactorily.

(2) Avoid a rigid classification of the types of research to be performed by national and international centres.

(3) Seek to develop more effective partnerships between the IARCs and national centres. (On this question the speaker emphasized that IARCs should avoid "selling their products"; instead they should develop cooperative arrangements with LDCs and seek to develop products and practices which are truly relevant to the LDCs' farming systems.)

Samper stated that some developing countries feel that they have much to offer to one another (in relation to national agricultural development). The IARCs should seek to play a leading "but not an imposing" role. The national institution should not be required to serve the purpose defined by the IARC. Regional programs and networks should update on a partnership basis. The developing countries feel that a regional program is their program and the IARC is participating in a cooperative network.

(4) Maintain an appropriate balance of investment among all of the essential components of national systems. Over-investment in any one component may create a serious imbalance and distortion of the whole system.
The initiative for IARC activities should rest with their Directors and Boards of Trustees. There is need for adequate dialogue between IARC Boards of Trustees and the members of CGIAR and TAC.

AREA VI

Almire Blumenschein addressed the question "What initiatives are suggested for training or observation in research management?"

He proposed three levels of training:

(a) training in agricultural planning and the formulation of priorities;

(b) training in the management of research institutions;

(c) training in leadership of multidisciplinary research groups.

Blumenschein asked whether competent research workers should be diverted from their research tasks and be trained as managers. He also asked what level of training and what should the training curricula include for each of the three groups he had proposed. He suggested that there might be benefit if developing countries were to study the management structures and practices of the IARCs. He recommended that the IADS might consider including training in research management within the scope of its activities.

(EDITOR'S NOTE: Though a great deal was said during the conference concerning the need for more attention to research management, very little of a specific nature came forth concerning how and by whom persons should be selected for management training, what such training should consist of, where the competence and facilities exist to provide such training, and at what stage of a person's career training in management should take place. One speaker proposed the advantage of providing management training in a series of short courses, participants being released from their normal duties for several short (perhaps two week) intensive training courses over a period of one or more years. It was also suggested that the greatest value is probably derived from management training by intermediate or senior scientists or administrators who have already carried some responsibility for resource and/or personnel management.)

Following the summaries of the various areas, other suggestions and opinions were offered.

One of the most important, and this is underlined in order to draw it to the attention of CGIAR members is:
It was urged that CGIAR be asked to consider the creation of working groups which would be asked to study in more detail some of the most important topics and questions raised by Bellagio VII. The consideration of the TAC on this recommendation would be particularly welcome. The TAC may wish to suggest which of the various points it considers most important and which might benefit from continued study by one or more working groups.

It was the strong opinion of the Bellagio VII participants that another year should not be allowed to elapse before any further consideration or action on these recommendations is taken.

Other points made which are worthy of note include:

1. The main initiative in seeking and obtaining donor assistance must rest with the recipient nations. The response to the questionnaire indicates the type and conditions of assistance which individual donors are prepared to offer and this should prove a useful guide to developing countries who seek assistance.

2. There is a need for more comprehensive information services and a wider dissemination of results of agricultural research carried out in developing countries.

3. In order to enable research scientists to exchange results and information, and to plan cooperative research endeavors, more financial support should be given to meetings to be organized and conducted by groups of developing countries. If a series of such meetings were made possible in various regions, perhaps one or more representatives from each of these regional meetings could present to the Bellagio group their collective observations and recommendations.

4. While it is the obvious hope and intention of all concerned that in due course the national agricultural systems of the developing countries will be entirely sufficient for their own needs, it does appear that the need for the IARCs will continue for a long time into the future. Therefore, the need to define the scope of their responsibilities both in terms of core programs, cooperative and regional research programs, and outreach activities needs to be clearly defined as a matter of urgent priority.
5. We need to give considerable attention to a study of those national research initiatives and programs which have produced successful results, to make these results and how they were achieved available to all other developing countries in the hope that some of the lessons learned by one developing country can be adapted or modified to suit the needs of others.

6. The question was asked "How can the international community be more speedily and effectively responsive to the need of the national agricultural programs of the recipient countries?" It is evident that different nations require different forms of assistance and that the organization and implementation of their national agricultural programs will differ according to their overall national economic, technical and social development plans. The need for CGIAR, the IARCs and other international bodies to be sensitive to the total national system in each recipient country cannot be overemphasized.

As a final general recommendation, it was urged that the momentum and enthusiasm which was evident during the meeting at Montebello be not allowed to dissipate and that under no circumstances should a further year be allowed to elapse before the subject is taken up again. It is believed that sufficient interest exists to make possible the formation of a number of working groups to discuss in detail and recommend courses of action on several of the most urgent matters. As stated above, there seemed to be a consensus that no new institution, apart from the proposed IADS, should be created to deal with strengthening of national agricultural research systems. At the same time, it was felt that the CGIAR may find it an excessive burden to take full responsibility for national systems in addition to their support for the IARCs and other related internation initiatives. The desirability of forming regional networks and possibly more regional research institutes to serve specific regional needs was repeatedly stated as was the importance of these initiatives being guided largely by developing nations of the regions they will seek to serve. If it does transpire that a regional approach to the strengthening of national agricultural research systems appears most efficacious the mechanism by which the regional systems can benefit from and cooperate with the IARCs and other international programs needs to be carefully considered as does the means by which the regional ventures can receive assistance from the proposed IADS and from individual and consortia of bilateral donors.
Discussions on all of these matters deserve immediate and objective discussion by appropriately qualified working groups.

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